

CogGauge (A Cognitive Assessment Tool), Phase II

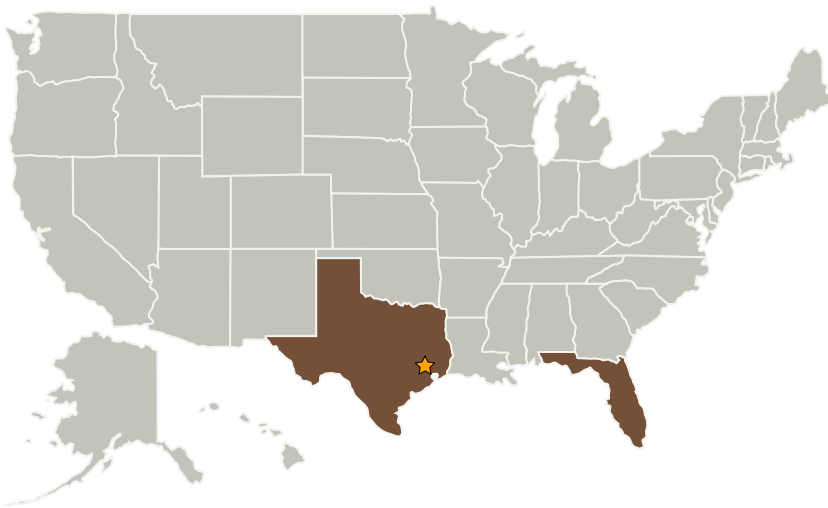
Completed Technology Project (2009 - 2012)



Project Introduction

The Cognitive Gauge (CogGauge) tool aims to develop a portable gaming application that assesses cognitive state of astronaut crew members with the goal of determining probable causes of observed cognitive deficits. CogGauge, while engaging astronauts in an entertaining experience, combines predictive tools for assessing cognitive workload with metrics that assess performance decrements. CogGauge uses a hybrid approach combining predictive workload values with behavioral/performance-based workload assessment across a number of task difficulty levels. This comprehensive approach takes into consideration learning effects across a number of cognitive tasks (i.e., mini-games in the gaming context) and derives assessment of performance decrements related to cognitive deficits to identify probable causes of cognitive decrement. Feedback from CogGauge may be provided to astronauts and/or flight surgeons to determine impact on space flight and missions.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Design Interactive, Inc.	Supporting Organization	Industry Women-Owned Small Business (WOSB)	Oviedo, Florida



CogGauge (A Cognitive Assessment Tool), Phase II

Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Transitions	2
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

CogGauge (A Cognitive Assessment Tool), Phase II

Completed Technology Project (2009 - 2012)



Primary U.S. Work Locations

Florida

Texas

Project Transitions



February 2009: Project Start



August 2012: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
 - └ TX05.5 Revolutionary Communications Technologies
 - └ TX05.5.1 Cognitive Networking